THE HORSE FLIES AND DEER FLIES OF KENTUCKY: NEW STATE RECORDS AND A REVISED ANNOTATED CHECKLIST (DIPTERA: TABANIDAE)[1]

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ABSTRACT: Collecting data are reported for 54 species of Tabanidae from Kentucky, including 13 new state records. The revised checklist is ordered according to Stone *et al.* (1965), *A Catalog of the Diptera of America North of Mexico.*

The tabanid fauna of Kentucky was first treated extensively by Townsend (1955), who listed 34 species with localities, dates, and names of collectors. His study was based on specimens at the University of Kentucky collected by S.J. Anderson, H. Garman, H. H. Jewett, B. F. Quisenberry, P.O. Ritcher, H. Tilson, and L. H. Townsend. Determinations were made by C. B. Philip and Alan Stone. Since publication of that work, *Chrysops aestuans* Van der Wulp and *C. striatus* Osten Sacken were found to be misidentified and so are removed from the list.

The present list includes 54 species, 13 of which are reported here for the first time. Of the remaining 41, 31 are from Townsend (1955), and 10 were recorded in Philip (1947), Philip *in* Stone *et al.* (1965), and other literature not cited here.

The records presented here are based on specimens in the University of Louisville collection, recent additions to the University of Kentucky collection, and information from the extensive files of the third author, who also made most of the determinations.

The arrangement of genera and species follows that of Philip *in* Stone *et al.* (1965). Thus species are listed alphabetically within each genus, not in any presumed phylogenetic order. Information cited by Townsend (1955) is not repeated here (with three exceptions). Months in which captures were made refer to our records; however, in three cases months of capture are indicated in parentheses because they were derived from Townsend's dates. In addition species for which we have no additional information are listed along with references to pages in Townsend's paper, on which the names appear, to make this a complete listing of all Tabanidae known from Kentucky at this time. Counties are indicated with specific localities when they first

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appear in the list.

SUBFAMILY PANGONINAE

Genus STONEMYIA Brennan

Stonemyia isabellina (Wiedemann). Philip *in* Stone *et al.*, p. 321.

Genus GONIOPS Aldrich

Goniops chrysocoma (Osten Sacken). Butler Co.; Pine Mountain Settlement School, Harlan Co. (female collected by Covell on night of 8 July, 1977, when attracted to the buzzing sound she made while ovipositing); Robinson Forest, Breathitt Co. June - Aug.

SUBFAMILY CHRYSOPINAE

Genus CHRYSOPS Meigen

Chrysops callidus Osten Sacken. Anchorage, Lake Sympson, Louisville, and Sleepy Hollow, Jefferson Co.; Bernheim Forest, Bullitt Co.; Calvert City, Marshall Co.; Fleming Co.; Land Between the Lakes, Trigg Co.; Levi Jackson State Park, Laurel Co.; Lexington, Fayette Co.; Mannsville, Taylor Co.; Meade Co.; Oldham Co.; Robinson Forest; Sinai, Anderson Co. May - Aug, Oct.

Chrysops carbonarius Walker. Cumberland Falls State Park, Whitley Co. June.

Chrysops flavidus Wiedemann. Townsend, p. 70 (June).

Chrysops geminatus Wiedemann. Townsend, p. 70 (June, July).

Chrysops impunctus Krober. Natural Bridge State Park, Powell Co. June.

Chrysops macquarti Philip. Cumberland Falls State Park; Daniel Boone National Forest, Laurel and Pulaski Counties; Horner Bird and Wildlife Sanctuary (University of Louisville's research farm), Oldham Co.; Louisville; Robinson Forest; vicinity of Muldraugh, Meade Co.; Wolfe Co. June, July.

Chrysops moechus Osten Sacken. Daniel Boone National Forest, Pulaski Co.; Meade Co.; Robinson Forest. June, July.

Chrysops niger Macquart. Lexington; Louisville; Prospect, Jefferson Co. May.

Chrysops pikei Whitney. Caneyville (specimen reported by Townsend as *striatus* Osten Sacken); Glendale, Hardin Co.; Hancock Co. June.

Chrysops separatus Hine. Grayson Co. Apr.

Chrysops univittatus Macquart. Bardstown, Nelson Co.; Crailhope, Green Co.; Daniel Boone National Forest, Leslie Co.; Grant Co.; Horner Bird and Widlife Sanctuary; Lexington; Louisville; Natural Bridge State Park; Robinson Forest. June - Sept.

Chrysops upsilon Philip. NEW STATE RECORD. Ballard Wildlife Refuge, Ballard Co.; Land Between the Lakes; Oldham Co. July, Sept.

Chrysops vittatus Wiedemann. Ballard Wildlife Refuge; Crailhope; Daniel Boone National Forest, Leslie Co.; Jefferson Co.; Land Between the Lakes; Lexington; Oldham Co.; Wolf Creek Lake, Wayne Co. June, July.

SUBFAMILY TABANINAE

Genus LEUCOTABANUS Lutz

Leucotabanus annulatus (Say). Fulton Co.; Land Between the Lakes; Lexington; Taylor Co. June - Aug.

Genus TABANUS Linnaeus

Tabanus abdominalis Fabricius. Cumberland Gap, Bell Co.; Jefferson Co.; Louisville. May, July, Oct.

Tabanus americanus Forster. Lexington. Sept., Oct.

Tabanus atratus Fabricius. Daniel Boone National Forest, Leslie Co.; Fern Creek, Jefferson Co.; Finchville, Shelby Co.; Frankfort, Franklin Co.; Mason Co.; Oldham Co. May - Sept.

Tabanus calens Linnaeus. Bernheim Forest; Carlisle, Nicholas Co.; Dry Ridge, Graves Co.; Land Between the Lakes; Livia, Daviess Co.; Louisville; Mammoth Cave National Park, Edmonson Co.; Oldham Co.; Robinson Forest; Russell Co.; Shelby Co. July - Oct.

Tabanus cymatophorus Osten Sacken. Philip *in* Stone *et al.*, p. 333.

Tabanus equalis Hine. Bernheim Forest; Springfield, Washington Co.; June - Aug.

Tabanus fairchildi Stone. Reported from Kentucky by Philip (1947).

Tabanus fulvulus Wiedemann. Kenlake State Park, Calloway Co.; Land Between the Lakes; Levi Jackson State Park; Robinson Forest. June, July.

Tabanus fuscicostatus Hine. Taylor Co. May.

Tabanus gladiator Stone. NEW STATE RECORD. Louisville. Aug., Sept.

Tabanus lineola Fabricius. Georgetown, Scott Co.; Gethsemane, Nelson Co.; Louisville; Robinson Forest. Apr., June, July.

Tabanus longus Osten Sacken. Townsend, p. 71 (Aug.).

Tabanus melanocerus Wiedemann. Gethsemane; Robinson Forest. July, Aug.

Tabanus molestus Say. Louisville; Robinson Forest. May, July, Aug. Philip *in* Stone *et al.* reported "var. *mixis* Philip" also from Kentucky.

Tabanus mularis Stone. NEW STATE RECORD. Land Between the Lakes. June, July.

Tabanus nigrescens Palisot de Beauvois. Golden Pond, Trigg Co. July.

Tabanus nigripes Wiedemann. NEW STATE RECORD. Robinson Forest. July.

Tabanus pallidescens Philip. NEW STATE RECORD. Bernheim Forest; Bullitt Co.; vicinity of Columbia, Adair Co.; Daniel Boone National Forest, Leslie Co.; Hindman, Knott Co.; Lyon Co.; Robinson Forest; Wayne Co. June - Aug.

Tabanus proximus Walker. NEW STATE RECORD. Cayce, Marshall Co. July.

Tabanus pumilus Macquart. NEW STATE RECORD. Jefferson Co.; Lexington. May, June.

Tabanus quinquevittatus Wiedemann. Glasgow, Barren Co.; Jefferson Co.; Land Between the Lakes; Mannsville. May - Aug.

Tabanus reinwardtii Wiedemann. Towsend (p. 72) cited a reared specimen from Lexington, emerged Aug. 4.

Tabanus sackeni Fairchild. Bullitt Co.; Land Between the Lakes; Mammoth Cave National Park; Oldham Co.; Robinson Forest; vic. Paducah, McCracken Co. July, Sept., Oct.

Tabanus sagax Osten Sacken. NEW STATE RECORD. Daniel Boone National Forest, Pulaski Co. June.

Tabanus similis Macquart. Bernheim Forest; Big Bone Lick, Boone Co.; Jefferson Co.; Lexington. May, June.

Tabanus sparus Whitney. Robinson Forest. June, July. These specimens represent "var. *milleri* Whitney."

Tabanus sublongus Stone. NEW STATE RECORD. Golden Pond. Aug.

Tabanus subsimilis Bellardi. Bernheim Forest; Jefferson Co.; Land Between the Lakes; Lexington; Robinson Forest. Apr. - Sept. Townsend (p. 72) listed this as *T. vittiger schwardtii* Philip, now a synonym of *subsimilis.*

Tabanus sulcifrons Macquart. This species, according to Townsend (p. 72) and our own records, is the most common horse fly in Kentucky. Bernheim Forest; Campbellsville, Taylor Co.; Crailhope; Gethsemane; Glasgow; Horner Bird and Wildlife Sanctuary; Jefferson Co.; Land Between the Lakes; Leon, Carter Co.; Livingston Co.; London, Laurel Co.; Lyon Co.; Maysville, Mason Co.; Meade Co.; Midway, Woodford Co.; Natural Bridge State Park; Owingsville, Henry Co.; Paintsville, Johnson Co.; Pine Mountain State Park, Bell Co.; Princeton, Caldwell Co.; Quicksand, Breathitt Co.; Richmond, Madison Co.; Shelbyville, Shelby Co.; Shepherdsville, Bullitt Co.; Sulphur, Henry Co.; Wayne Co.; Williamstown, Grant Co; Whitesville, Letcher Co. Apr., June - Sept.

Tabanus trimaculatus Palisot de Beauvois. Gethsemane; Horner Bird and Wildlife Sanctuary; Jefferson Co. May - July.

Tabanus turbidus Wiedemann. Mammoth Cave National Park. July.

Tabanus venustus Osten Sacken. NEW STATE RECORD. Glendale. July.

Tabanus wilsoni Pechuman. NEW STATE RECORD. Trigg Co. 1964 (no date).

Genus HYBOMITRA Enderlein

Hybomitra cincta (Fabricius). NEW STATE RECORD. Robinson Forest. July, Aug.

Hybomitra difficilis (Wiedemann). Bernheim Forest; Daniel Boone National Forest, Laurel and Pulaski Counties; Fleming Co.; Robinson Forest. May, June.

Hybomitra lasiophthalma (Macquart). Bernheim Forest. Apr., May.

Hybomitra sodalis (Williston). NEW STATE RECORD. Robinson Forest. July.

Genus HAMATABANUS Philip

Hamatabanus carolinensis (Macquart). Bernheim Forest; Jefferson Co. May - Aug.

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